

Match the terms in Column II with the definitions in Column I. Write the letter in the blank.

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- | | | |
|----------|---|---------------------------|
| <u>A</u> | 1 - heterogeneous mixture containing a liquid in which visible particles never settle. | A - colloid |
| <u>E</u> | 2 - contains 2 or more gaseous, liquid or solid substances blended evenly throughout the mixture. | B - compound |
| <u>C</u> | 3 - substance in which all atoms are alike | C - element |
| <u>F</u> | 4 - any material made of 2 or more substances that can be physically separated | D - heterogeneous mixture |
| <u>I</u> | 5 - the scattering/ blocking of light by colloidal particles | E - homogeneous mixture |
| <u>H</u> | 6 - heterogeneous mixture with large particles that settle. | F - mixture |
| <u>D</u> | 7 - a mixture in which different materials can be easily distinguished | G - solution |
| <u>G</u> | 8 - homogeneous mixture of particles so small they cannot be seen & will never settle out | H - suspension |
| <u>B</u> | 9 - substance in which 2 or more elements are combined in a fixed proportion. | I - Tyndall effect |

Elements, Compounds & Mixtures

Identify each of the following as an element, compound or mixture. Use the letters E -element, C - compound, Hm for homogeneous mixture & Ht form heterogeneous mixture.

- | | | | |
|-----------|-----------------------------|-----------|-------------------|
| <u>Hm</u> | 1. flat soda pop | <u>Hm</u> | 6. black coffee |
| <u>Ht</u> | 2. cherry vanilla ice cream | <u>Hm</u> | 7. sugar water |
| <u>E</u> | 3. aluminum foil | <u>Ht</u> | 8. beach sand |
| <u>Ht</u> | 4. soil | <u>E</u> | 9. iron |
| <u>C</u> | 5. sugar | <u>Ht</u> | 10. hot chocolate |

Fill in the chart below.

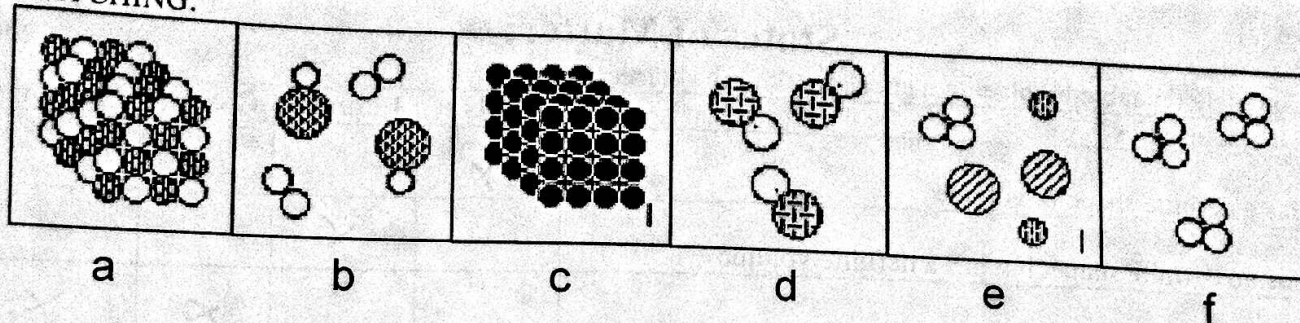
Phase Change	From	To	Heat (added or removed)
Boiling	Liquid	Gas	Added
Condensation	<u>G</u>	<u>L</u>	<u>R</u>
Evaporation	<u>L</u>	<u>G</u>	<u>A</u>
Freezing	<u>L</u>	<u>S</u>	<u>R</u>
Melting	<u>S</u>	<u>L</u>	<u>A</u>
Deposition	<u>G</u>	<u>S</u>	<u>R</u>
Sublimation	<u>S</u>	<u>G</u>	<u>A</u>
Vaporization	<u>L</u>	<u>G</u>	<u>A</u>

Practice – Properties & Changes of Matter**Identify each of the following as a physical or chemical property.**

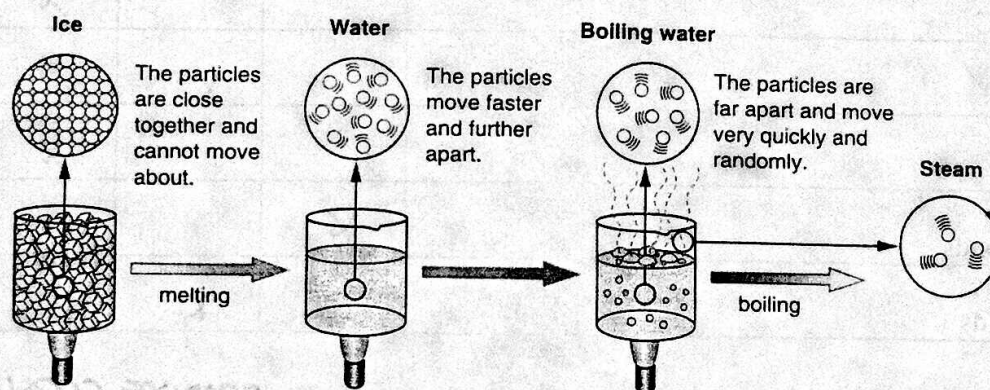
- P Water boils at 100 degrees Celsius
- P Diamonds have a hardness of 10 & can cut glass.
- C Water can be separated into hydrogen & oxygen by electrolysis.
- P Sugar can be dissolved in water.
- C Vinegar bubbles when mixed with baking soda.
- C Yeast uses sugar to form carbon dioxide & ethanol.
- C Wood can be burned.
- P Aluminum has a low density.
- P Aluminum can be folded &/or bent.
- P Oxygen is a gas at room temperature.
- P Chlorine gas is yellow.

Identify each of the following as a physical or chemical change.

- P Dry ice sublimates at room temperature creating fog.
- C Gasoline burns in the presence of oxygen.
- C Salt dissolves in water.
- C An old bike rusts when left outside too long.
- P Breaking a bone in the human body.
- C Mitochondria in cells generate energy from sugars.
- P Absorption of water by the roots of a plant.
- P Splitting a block of wood.
- C Baking a cake.

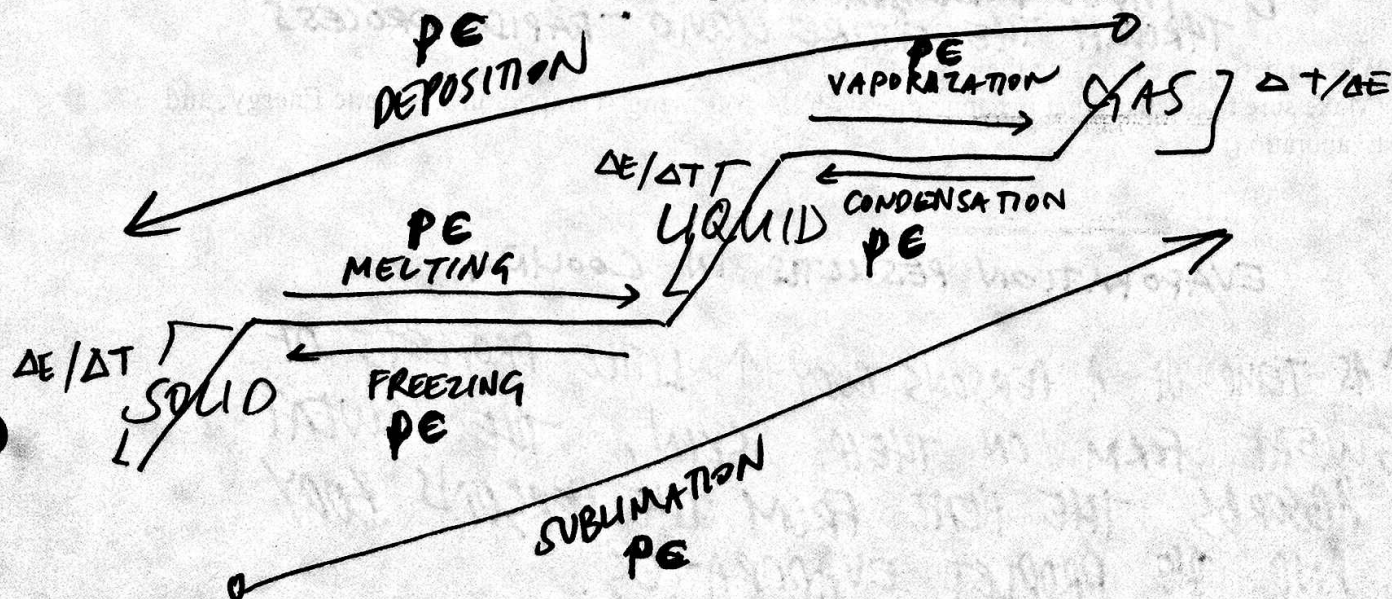


- C 1. Pure element
A 2. Mixture of 2 elements
D 3. Pure compound
F 4. Pure molecule
B 5. Mixture of a compound and a molecule
E 6. Mixture of a molecule and two elements



▲ Changes of state in matter.

Draw the heating curve associated with the above picture. Include: Labels for Heating and Cooling (ex/melting and freezing), show where energy/temperature increase and decreases.



States of Matter:

Complete the table by placing a check mark in the correct column.

Characteristics	Solids	Liquids	Gases	Plasma
Has a definite shape & volume	X			
Has no definite shape, but has a definite volume		X		
Has no definite shape & no definite volume			X	X
Will take the shape of its container		X	X	X
Particles will expand to fill all available space			X	X
Particles are packed tightly & "locked" in place	X			
Particles are close together, but freely move around		X		
Exists in stars & fire				X
Water at 0°C	X			
Water at 100°C			X	
Water at 50°C		X		
Has no Bonds			X	
Has Strong Bonds	X			
Has weak Bonds		X		

What is the difference between Boiling and Evaporation? (hint: where does each take place)

E → TAKES PLACE AT ALL TEMPS - TAKES PLACE AT THE SURFACE

B → TAKES PLACE ~~AT~~ AT A CERTAIN TEMP - TAKES PLACE THROUGH THE ENTIRE LIQUID - RAPID PROCESS

When a person is exercising they sweat. WHY?

(Make sure to discuss what is happening with the following: Temperature, Kinetic Energy, and Evaporation)

EVAPORATION RESULTS IN COOLING

KE ↑ AS TEMP OF A PERSONS BODY ↑, LITTLE DROPLETS OF SWEAT FORM ON THEIR SKIN, THE SWEAT ABSORBS THE HEAT FROM THE PERSONS BODY AND THE DROPLET EVAPORATES.